



Attorney Docket No. IMMR-023/04US

PATENT

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of David ALEXANDER *et al.*

Serial No.: 10/657,145

Examiner: John Sotomayor

Confirmation No.: 1899

Art Unit: 3714

Filed: September 9, 2003

For: **INTERFACE DEVICE AND METHOD FOR INTERFACING  
INSTRUMENTS TO MEDICAL PROCEDURE SIMULATION SYSTEMS**

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U.S. Patent and Trademark Office  
220 20<sup>TH</sup> Street South  
Customer Window, Mail Stop Amendment  
Crystal Plaza Two, Lobby, Room 1B03  
Arlington, VA 22202

**INFORMATION DISCLOSURE STATEMENT TRANSMITTAL**

Enclosed is an Information Disclosure Statement and accompanying Form PTO/SB/08A for the above-identified patent application.

- ☐ In accordance with 37 C.F.R. §1.97(b), no additional fee for submission of the IDS is required.
- ☒ In accordance with 37 C.F.R. §1.97(c), also enclosed is:
  - ☒ the fee of \$180.00 as set forth in 37 C.F.R. §1.17(p); or
  - ☐ a statement as specified in 37 C.F.R. §1.97(e).
- ☐ In accordance with 37 C.F.R. §1.97(d), a statement as specified in 37 C.F.R. §1.97(e) and the fee of \$180.00 as set forth in 37 C.F.R. §1.17(p) are also enclosed.
- ☒ Check in the amount of \$180.00 is attached.
- ☐ A return receipt postcard is also enclosed.
- ☐ Please charge \$\_\_\_ to Deposit Account No. 50-1283 for the total fee. This paper is being submitted in duplicate.

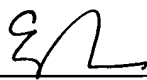
The Commissioner is hereby authorized to charge any appropriate fees under 37 C.F.R. §§1.16, 1.17, and 1.21 that may be required by this paper, and to credit any overpayment, to Deposit Account No. 50-1283.

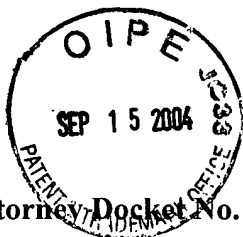
Dated: September 15, 2004

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Respectfully submitted,  
**COOLEY GODWARD LLP**

By: \_\_\_\_\_

  
Erik B. Milch  
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Attorney Docket No. IMMR-023/04US

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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

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**INFORMATION DISCLOSURE STATEMENT  
UNDER 37 C.F.R. §1.97(c)**

In accordance with the duty of disclosure set forth in 37 C.F.R. §1.56, Applicant(s) hereby submits the following information in conformance with 37 C.F.R. §§1.97 and 1.98.

- ☒ Pursuant to 37 C.F.R. §1.98, copies of the U.S. patent application publication documents cited in the attached Form PTO/SB/08 (1 of 2) are provided on the enclosed CD.
- ☒ No copies of the publications listed on the attached Form PTO/SB/08A (2 of 2) are being provided pursuant to 37 C.F.R. §1.98(d) because the publications were previously cited by or submitted to the Office in prior Application Serial No., 09/237,969, filed January 27, 1999, to which the above-identified application claims priority under 35 U.S.C. §120.
- ☐ No copies of any U.S. patents or U.S. patent application publications listed on the attached Form PTO/SB/08A are being provided pursuant to 37 C.F.R. §1.98 because this application was filed after June 30, 2003.
- ☐ Publication(s) \_\_\_ listed on the attached Form PTO/SB/08A were cited in a foreign search or examination report corresponding to \_\_\_ application serial no. and mailed on \_\_\_.
- ☐ Enclosed is a copy of a non-English publication(s) \_\_\_. Pursuant to §609 of the M.P.E.P., Applicant submits the attached foreign search or examination report, which cites such non-English language publication(s).

- ☐ Enclosed is a copy of a non-English publication(s) \_\_\_\_\_. English language publication \_\_\_\_ (copy enclosed) claims priority from this non-English publication.
- ☐ Enclosed is an explanation of non-English publication(s) \_\_\_\_ for which an English translation is not available.
- ☐ Enclosed is an English translation of non-English publication(s) \_\_\_\_ cited in the attached Form PTO/SB/08A.
- ☐ Enclosed is a copy of pending patent Application Serial No. \_\_\_\_\_.

This Information Disclosure Statement is filed after the period specified in 37 C.F.R. § 1.97(b), but before the mailing of:

- ☒ a final action under 37 C.F.R. §1.113;
- ☐ a notice of allowance under 37 C.F.R. §1.311; or
- ☐ an action that otherwise closes prosecution in this application.

In accordance with 37 C.F.R. §1.97(c) also enclosed is:

- ☒ Fee under 37 C.F.R. §1.17(p) in the amount of \$180.00; or
- ☐ Statement as specified in 37 C.F.R. §1.97(e):
  - ☐ Each item of information contained in the Information Disclosure Statement cited herein was first cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing date of the Information Disclosure Statement; or
  - ☐ No item of information contained in the Information Disclosure Statement submitted herewith was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the undersigned, having made a reasonable inquiry, no item of information contained in the Information Disclosure Statement was known to any individual designated in 37 C.F.R. §1.56(c) more than three months prior to the filing date of the Information Disclosure Statement.


It is respectfully requested that the Examiner consider the above-noted information and return an initialed copy of the attached Form PTO/SB/08A to the undersigned.

Dated: September 15, 2004

Cooley Godward LLP  
ATTN: Patent Group  
One Freedom Square  
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Erik B. Milch  
Reg. No. 42,887



(1 of 2)

PTO/SB/08A (10-01)

Approved for use through 10/31/2002. OMB 0651-0031  
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Substitute for form 1449A/PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Sheet 1 of 3

**Complete if Known**

Application Number	10/657,145
Filing Date	September 9, 2003
First Named Inventor	David Alexander
Art Unit	3714
Examiner Name	John Sotomayor
Attorney Docket Number	IMMR023/04US

**U.S. PATENT DOCUMENTS**

Examiner	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number Kind Code <sup>2</sup> (if known)			
		6,422,941	7/23/2002	Thorner et al.	
		6,160,489	12/12/2000	Perry et al.	
		6,111,577	8/29/2000	Zilles et al.	
		6,086,528	07/11/2000	Adair	
		5,817,107	10/6/1998	Schaller	
		5,690,582	11/25/1997	Ulrich et al.	
		5,575,761	11/19/1996	Hajianpour	
		5,437,607	8/1/1995	Taylor	
		5,436,622	7/25/1995	Gutman et al.	
		5,283,970	2/8/1994	Aigner	
		5,186,695	2/16/1993	Mangseth et al.	
		5,175,459	12/29/1992	Danial et al.	
		5,165,897	11/24/1992	Johnson	
		5,022,384	6/11/1991	Freels	
		4,885,565	12/5/1989	Embach	
		4,484,191	11/20/1984	Vavra	
		4,464,117	8/7/1984	Foerst	
		4,439,162	03/27/1984	Blaine	
		4,333,070	6/1/1982	Barnes	
		4,262,549	4/21/1981	Schwellenbach	
		4,127,752	11/28/1978	Lowthorp	
		2,972,140	2/14/1961	Hirsch	

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document			Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Country Code <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>5</sup> (if known)			
		JP	H2-185278		7/19/1990	Taito Corporation	
		JP	H4-8381		1/13/1992	Epoch Co. and Key- Planning Co.	
		JP	H7-24147		1/27/1995	Sega Corporation	
		JP	H5-192449		8/3/1993	Taito Corporation	

Examiner  
SignatureDate  
Considered

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Kind Codes of U.S. Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231

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**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

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Sheet **2** of **3****Complete if Known**

Application Number	10/657,145
Filing Date	September 9, 2003
First Named Inventor	David Alexander
Art Unit	3714
Examiner Name	John Sotomayor
Attorney Docket Number	IMMR023/04US

**OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS**

Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
		PATRICK, "Design, Construction, and Testing of a Fingertip Tactile Display for Interaction with Virtual and Remote Environments," <i>Master of Science Thesis</i> , MIT, Aug. 1990, archived Nov. 8, 1990.
		CALDER, "Design of A Force-Feedback Touch-Introducing Actuator For Teleoperator Robot Control," <i>Bachelor of Science Thesis</i> , MIT, May 1983, archived June 23, 1983.
		WIKER, "Teletouch Display Development: Phase 1 Report," <i>Technical Report 1230</i> , Naval Ocean Systems Center, San Diego, July 1988.
		BLISS, "Optical-to-Tactile Image Conversion for the Blind," <i>IEEE Transactions on Man-Machine Systems</i> , Vol. MMS-11, No. 1, March 1970.
		JOHNSON, "Shape-Memory Alloy Tactile Feedback Actuator," <i>Armstrong Aerospace Medical Research Laboratory</i> , AAMRL-TR-90-039, August, 1990.
		KONTARINIS et al., "Tactile Display of Vibratory Information in Teleoperation and Virtual Environments," <i>PRESENCE</i> , 4(4):387-402, Harvard Univ., 1995.
		AUKSTAKALNIS et al., "Silicon Mirage: The Art and Science of Virtual Reality," ISBN 0-938151-82-7, pp. 129-180, 1992.
		EBERHARDT et al., "Inducing Dynamic Haptic Perception by The Hand: System Description and Some Results," <i>DSC-Vol. 55-1, Dynamic Systems and Control: Volume 1</i> , ASME 1994.
		GOBEL et al., "Tactile Feedback Applied to Computer Mice," <i>International Journal of Human-Computer Interaction</i> , Vol. 7, No. 1, pp. 1-24, 1995.
		PIMENTEL et al., "Virtual Reality: through the new looking glass," 2 <sup>nd</sup> Edition; McGraw-Hill, ISBN 0-07-050167-X, pp. 41-202, 1994.
		"Cyberman Technical Specification," <i>Logitech Cyberman SWIFT Supplement to Logitech Mouse Technical Reference and Programming Guide</i> , 4/5/1994.
		OUHYOUNG et al., "The Development of A Low-Cost Force Feedback Joystick and Its Use in the Virtual Reality Environment," <i>Proceedings of the Third Pacific Conference on Computer Graphics and Applications, Pacific Graphics '95</i> , Seoul, Korea, 21-24 August 1995.
		KACZMAREK et al., "Tactile Displays," <i>Virtual Environment Technologies</i> , Chap. 9, pp. 349-414.
		LAKE, "Cyberman from Logitech," at <a href="http://www.ibiblio.org/GameBytes/issue21/greviews/cyberman.html">http://www.ibiblio.org/GameBytes/issue21/greviews/cyberman.html</a> , 1994.
		"Component Maintenance Manual With Illustrated Parts List, Coaxial Control Shaker Part No. C-25502," Safe Flight Instrument Corporation, Revised 28 January 2002 (3 pages).

Examiner Signature		Date Considered	
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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

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<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)		Application Number	10/657,145
		Filing Date	September 9, 2003
		First Named Inventor	David Alexander
		Art Unit	3714
		Examiner Name	John Sotomayor
Sheet 3 of 3	Attorney Docket Number	IMMR023/04US	

OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS			
Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	
		"Technical Manual Overhaul Instructions With Parts Breakdown, Coaxial Control Shaker Part No. C-25502," Safe Flight Instrument Corporation, Revised 15 July 1980 (23 pages).	
		SCANNELL, "Taking a Joystick Ride," <i>Computer Currents</i> , Boston Edition, Vol. 9, No. 11, November 1994	
		YAMAKITA et al., "Tele-Virtual Reality of Dynamic Mechanical Model," <i>Proceedings of the 1992 IEEE/RSJ International Conference on Intelligent Robots and Systems</i> , Raleigh, NC, July 7-10, 1992	
		NOLL, "Man-Machine Tactile," <i>SID Journal</i> , July/August 1972 Issue.	
		ROSENBERG, "Virtual Fixtures: Perceptual Overlays Enhance Operator Performance In Telepresence Tasks," <i>Ph.D. Dissertation</i> , Stanford University, June 1994.	

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Examiner Name	John Sotomayor				
Sheet	1	of	10	Attorney Docket Number	IMMR023/04US

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY
		Number	Kind Code <sup>2</sup> (if known)		
		6,223,100		Green	04-2001
		5,995,738		DiGioia, III et al.	11-30-1999
		5,967,790		Strover et al.	10-19-1999
		5,956,040		Asano et al.	09-21-1999
		5,951,301		Younker	09-14-1999
		5,947,743		Hasson	09-07-1999
		5,945,056		Day et al.	08-31-1999
		5,941,710		Lampotang et al.	08-24-1999
		5,909,380		Dubois et al.	06-01-1999
		5,891,131		Rajan et al.	04-06-1999
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		5,853,292		Eggert et al.	12-29-1998
		5,828,197		Martin et al.	10-27-1998
		5,825,941		Linford et al.	10-20-1998
		5,825,308		Rosenberg	10-20-1998
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		5,807,115		Hu	09-15-1998
		5,805,140		Rosenberg et al.	09-08-1998
		5,800,179		Bailey	09-01-1998
		5,800,178		Gillio	09-01-1998
		5,800,177		Gillio	09-01-1998
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		5,785,630		Bobick, et al.	07/28/1998
		5,769,640		Jacobus et al.	06-23-1998
		5,768,134		Swaelens et al.	06-16-1998
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		5,755,577		Gillio	05-26-1998
		5,742,278		Chen et al.	04-21-1998
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		5,739,811		Rosenberg et al.	04-14-1998
		5,734,373		Rosenberg et al.	03-31-1998
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		5,724,264		Rosenberg et al.	03-03-1998
		5,722,836		Younker	03-03-1998

<sup>1</sup> Unique citation designation number.<sup>2</sup> See attached Kinds of U.S. Patent Documents.

Examiner Signature		Date Considered	
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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Substitute for form 1449A/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  <i>(use as many sheets as necessary)</i>				<i>Complete if Known</i>	
				Application Number	10/657,145
				Filing Date	September 9, 2003
				First Named Inventor	David Alexander
				Group Art Unit	3714
Examiner Name	John Sotomayor				
Sheet	2	of	10	Attorney Docket Number	IMMR023/04US

U.S. PATENT DOCUMENTS					
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		Number	Kind Code <sup>2</sup> (if known)		
		5,721,566		Rosenberg et al.	02-24-1998
		5,704,791		Gillio	01-06-1998
		5,701,140		Rosenberg et al.	11-23-1997
		5,691,898		Rosenberg et al.	11-25-1997
		5,687,259		Linford	11-11-1997
		5,682,886		Delp et al.	11-04-1997
		5,666,138		Culver	09-09-1997
		5,629,594		Jacobus et al.	05-13-1997
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		5,593,306		Kohnke	01-14-1997
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		5,576,727		Rosenberg et al.	11-19-1996
		5,559,412		Schuler	09-24-1996
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		5,451,924		Massimino et al.	09-19-1995
		5,438,529		Rosenberg et al.	08-01-1995
		5,414,337		Schuler	05-09-1995
		5,403,191		Tuason	04-04-1995
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		5,343,871		Bittman et al.	09-06-1994
		5,338,198		Wu et al.	08-16-1994
		5,334,027		Wherlock	08/02/1994
		5,333,106		Lanpher et al.	07-26-1994
		5,322,441		Lewis et al.	06-21-1994

Examiner Signature		Date Considered	
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		5,320,538		Baum	06-14-1994
		5,320,537		Watson et al.	06-14-1994
		5,320,326		Ju et al.	06-14-1994
		5,311,422		Loftin et al.	05-10-1994
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				Group Art Unit	3714
Examiner Name	John Sotomayor				
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Examiner Initials*	Cite No. <sup>1</sup>	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY
		Number	Kind Code <sup>2</sup> (if known)		
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Examiner	Cite	Foreign Patent Document		Name of Patentee or Applicant of Cited	Date of Publication

<sup>1</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3).

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<sup>1</sup> Applicant is to place a check mark here if English language Translation is attached.

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OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS				
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>6</sup>	
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